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EXAMINER

WILSON, KATINA M

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 09/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/069,351

Applicant(s)

KINGSTON ET AL. 

Examiner

Katina M Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 31-96 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-33, 35, 37, 39-42, 44-51, 58-61, 63, 65, 67-81, 84, 86-89 and 91-96 is/are rejected.
- 7) ☒ Claim(s) 34, 36, 38, 43, 52-57, 62, 64, 66, 71, 83, 85, 90 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 46, 74 and 93 recites the limitation "the face" in claim line 1. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 31 32, 33, 35, 37, 42, 44-51, 58-61, 63, 65, 70, 72-77, 79-82, 84, 89, 91-96 are rejected under 35 U.S.C. 102(b) as being anticipated by Pieper et al (5391298).

As to claims 31, 58, 59 and 78, 79, Pieper et al teaches a method of performing a solid phase extraction (SPE) on an aqueous fluid using a hydrophobic, solid phase extraction medium 40 (membrane) positioned in a pressurizable housing 18, allowing an aqueous liquid from the inlet 25 to an outlet 32 under positive pressure. The SPE media may comprise a fibrous or fibril structure, polytetrafluoroethylene (PTFE) fibril matrix, having particle enmeshed therein. The particulate material can be an organic compound, a

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polymer, or an inorganic oxide such as silica, or an ion exchange resin or chelating particles. A disk support plate 38 (solid support) can be employed in housing 18 to up hold a disk assembly 39. The disk assembly 39 includes optional fluid permeable porous sheets 42 and 44 (receiving phase disk) disposed on opposite sides of SPE membrane 40. Porous sheets 4 and 44 maybe pre-filter and the disk assembly 39 is removable (abstract, col. 4 and 5, figures 1-3).

As to claims 32, 60, and 80, the support plate is in the form of a solid carrier for solid phase material. The support plate 38 is a plastic disk machined from a piece of Kel-P brand PCTFE thermoplastic and comprises radially extending grooves that have opening to allow fluid to pass, but the grooves do not permit the fluid to pass back through (col. 5, 27-54).

As to claims 33, 61, and 81, the membrane is a hydrophobic solid phase extraction medium comprising a fibrous or fibril structure, PTFE fibril matrix. The SPE medium include any particle which can be coated with insoluble sorbent material or the surface of which can be derivative to provide a coating of insoluble sorbent material (col. 4, lines 34-54).

As to claims 35, 63, 82, the membrane is a hydrophobic solid phase extraction medium comprising a fibrous or fibril structure, PTFE fibril matrix (col. 4, lines 16-19).

As to claims 37, 65, 84, the hydrophobic medium has a low surface polarity.

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As to claims 42, 70, 89, the fluid permeable porous sheets 42 and 44 are shaped like a disk. (fig 2).

As to claims 44, 45, 72, 73, 91,92, the support plate 38 is a plastic disk machined from a piece of Kel-P brand PCTFE thermoplastic (col. 5, 27-54).

As to claims 46, 74, 93 a face of the membrane remote from the receiving phase has an open structured entangled mass of fibers (col. 4, lines 16-21).

As to claims 47, 75, 94, figure 2 shows a disk assembly 39 (passive sampling device) that an insert body adapted to allow insertion therein and removal therefrom of the solid receiving phase and adapted to allow access from the aqueous environment of the micro-pollutants to the membrane.

As to claims 48, 76, 95, figure 2 shows the disk assembly provided with removable means to allow fluid contact with the receiving phase between preparation and use of the disk assembly.

As to claim 49, 77, 96, the disk assembly comprises a medium 40 (PTFE) and porous sheets 42 and 44 (fig 2).

Claims 50 and 51 are inline with claims 31, 47-48. Pieper et al continues to teach the SPE medium is used for preparing sample for analysis. Since pre-filtering porous sheets 42 and 44 maybe used in conjunction with SPE medium 40, it is understood the pre filtering sheets maybe prepared for sample analysis, removed and analyzed (col. 1, lines 10-29; fig. 2).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 78 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pieper et al.

Claim 78 is inline with claim 31. Pieper et al does not disclose the diameter of the pores traversing the membrane. However, the diameter of the membrane pores is a design choice. It would have been obvious at the time of the invention to change the size of the membrane pores to the necessary size for proper performance. In re Rose , 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.)

7. Claims 39-41, 67-69, 86-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pieper et al.

Pieper et al does not teach/disclose the thickness of the membrane or the receiving phase to be less than the claim recited limitation. However, the thickness of the membrane and/or the receiving phase is a design choice. It would have been obvious at the time of the invention to change the size/thickness of the membrane and/or receiving phase to the necessary size for proper performance. In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955) (Claims directed to a lumber package "of appreciable size and weight requiring

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handling by a lift truck" where held unpatentable over prior art lumber packages which could be lifted by hand because limitations relating to the size of the package were not sufficient to patentably distinguish over the prior art.)

***Allowable Subject Matter***

8. Claims 34, 36, 38, 43, 52-57, 62, 64, 66, 71, 83, 85, 90 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


***Closing***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katina M Wilson whose telephone number is 703-308-7958. The examiner can normally be reached on Mon-Fri 6:15am-4:00pm, off 1<sup>st</sup> Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E Williams can be reached on 703-305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-3432 for regular communications and 703-308-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

KW  
August 14, 2003

  
HEZRON WILLIAMS  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800